REMARKS / ARGUMENTS

Claims 1, 4-9 and 21 remain pending in this application. No claims have been canceled or added.

Interview

Applicants wish to thank the Examiner and the Examiner's supervisor for conducting an interview with the undersigned and Applicants' representative. The following includes arguments presented during the interview.

35 U.S.C. §103

Claims 1-9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Teraslinna (U.S. Patent No. 5,812,626) in view of Kalkunte et al (U.S. Patent No. 6,470,016). These rejections are traversed as follows.

Teraslinna teaches a bandwidth monitoring method in which a bandwidth constraint is based upon the source endpoint identified by the address field and wherein the bandwidth constraint is enforced independently of the destination endpoint (column 2 lines 48-52). Kalkunte teaches an adaptive weighted round robin scheduling method for reading out data from queues. Kalkunte performs the steps of determining if a bandwidth cycle is completed and beginning another bandwidth cycle beginning with the highest priority queue (column 15, lines 13-23).

Neither of these references disclose that "when the packets of the specific type do not violate the contract bandwidth and the value in the header of the inputted packet does not correspond to a specific value indicative of the specific type of packets, transmitting the inputted packet after converting the packet to a packet having the specific value in its header". Therefore, it is submitted that the pending claims patentably define the present invention over the cited art.

Teraslinna merely discloses how to transmit data from a packet switch, and doesn't disclose or suggest converting the packet. Kalkunte merely discloses how to read out data from queues, and doesn't disclose or suggest monitoring the bandwidth nor converting the packet. Applicants wish to point out that Kalkunte is concerned only about reading out data from queues (referred to as "shaping" in the network technical field). On the other hand, our invention is concerned with monitoring the bandwidth and converting the packet (before queueing) (referred to as "policy" in the network technical field).

In other words, Kalkunte solves a bandwidth control problem by "shaping" with some queues of high and low priority, while the present invention solves the bandwidth control problem by policing. Thus, the present invention can solve the bandwidth control problem even if there is only one queue.

Furthermore, Teraslinna and Kalkunte teach away from solving the problem by "policy", as in the present invention. As such, the attempted combination of Teraslinna and Kalkunte fails to raise a prima facie case of unpatentability.

Since a new Examiner is currently handling this application, Applicants herein repeat remarks filed in the most recently filed response for the Examiner's convenience.

"The claims have been amended to recite that it is judged or determined whether an inputted packet corresponds to a specific type of packets that are transmitted in preference to other packets, according to a value in the header of the packet. When the specific type of packets do not violate the contract bandwidth, if a packet whose value in its header does not correspond to the specific type of packet is inputted, the packet is nonetheless transmitted after being converted to have this specific value in its header. In other words, a non-priority packet is converted to a priority packet and is transmitted as if it was a priority packet.

"This provides the significant advantage that non-priority packets can be transmitted as priority packets and use a portion of the contract bandwidth of the priority packets. This enables network resources to be used effectively (see specification, page 36, line 22 to page 38, line 11). Furthermore, by converting the non-priority packet to a priority packet having a specific value (indicating priority) in its header, the packet can be preferentially transferred over the network as a priority packet.

"As admitted by the Examiner, "Teraslinna does not explicitly state that the unused contract bandwidth of a specific type of packet is used for packets not of that specific type" (see Office Action, page 3, lines 10-11). As disclosed at column 5, lines 8-17, Teraslinna issues a penalty for violating the bandwidth contract to a

packet in such a manner that the violating packet is marked with a low priority for loss so that a node on the transmission route in the network can discard the marked packet if congestion occurs. Therefore, Teraslinna discloses demoting the priority of an inputted packet that has violated contract bandwidth so as to discard the violating packet upon congestion.

"On the other hand, the present invention seeks to transfer an inputted packet to its destination safely by upgrading the priority of the packet. Therefore, the trigger that relates to changing priority does not have any relation to the violation of a traffic contract of the input packet. As such, Teraslinna disclosure is substantially different from the present invention and one of ordinary skill in the art would not be motivated to modify Teraslinna to arrive at the presently claimed invention.

"The deficiencies in Teraslinna are not overcome by the newly cited reference to Kalkunte et al. The Examiner relies upon column 15, lines 13-24 of Kalkunte et al. However, this paragraph merely discloses an adaptive weighted round robin scheduling method which repeats bandwidth cycles for processing frame cues in a round-robin fashion from the highest priority cue in a state that none of the cues has any remaining bandwidth segments for a bandwidth cycle. The portion in Kalkunte et al cited by the Examiner is repeated as follows:

> The adaptive weighted round robin scheduling method determines that a bandwidth cycle is complete by determining that none of the cues has any remaining segments for the bandwidth cycle, upon which the adaptive round robin scheduling method begins another bandwidth cycle by repeating the steps of allocating, for each cue, the predetermined number of bandwidth segments for a bandwidth cycle and the

> predetermined number of transmission opportunities for a round robin cycle, and processing the cues consecutively in a round-robin fashion, beginning with the highest priority cue (Col 15, lines 13-24).

"As clearly disclosed in the passage quoted above, packets (or frames) are transmitted in order of priority by selecting them in a round robin fashion. However, the priority class in header of each of the packets remains unchanged, unlike the presently claimed invention. According to Kalkunte et al's method, a low priority packet , transmitted using the remaining bandwidth of packets with higher priority, is not guaranteed to be transmitted to its destination without any trouble since this packet is always a low priority packet at every node." (Excerpt of Response filed 2/4/05).

The Examiner is hereby invited to contact the undersigned by telephone with any questions.

Conclusion

In view of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.

By_____
Shrinath Malur
Reg. No. 34,663
(703) 684-1120